UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Region 8
Albuquerque, New Mexico

- - -

Hugh G. Calkins
Regional Conservator

ACTIVITIES

OF

SECTION OF WILDLIFE MANAGEMENT

IN

REGION 8

Regional Bulletin No. 18
Wildlife Management Series No. 2
October 4, 1937

ACTIVITIES

OF

SECTION OF WILDLIFE MANAGEMENT

IN

REGION 8

- - - - - -

CONTENTS

Procedures

Surveys

For the biologist to solve wildlife management problems and to make plans for the development of wildlife resources, it is necessary that he have adequate information concerning the species and area involved. Since the welfare of a species is always intimately

affected by other species and by the various aspects of its environment, this need for information is not satisfied by a mere census of the species requiring immediate attention. The necessary data can be adequately obtained only by a general faunal survey in which observations are made concerning all wildlife species, the condition of the various habitats and the effect of human activities. For these reasons it is imperative that a faunal survey precede the preparation of wildlife management plans.

Two years of field work by various members of the Section of Wildlife Management have developed the present method of making the faunal survey. Experience has indicated that the basic methods employed lend themselves to use in all the varied environmental conditions occurring throughout Region 8, and to any degree of intensification.

In the absence of any objective data with which to compare the results of these surveys, it is not at present possible to determine their absolute accuracy. However, from the limited number of checks that have been made, it is felt that the data provided by the surveys are sufficiently accurate for use in making preliminary land management plans, and that much of the data can be utilized in the preparation of more detailed plans.

The general faunal surveys, as they are conducted on land management units, are designed to obtain information on the following subjects:

1. General wildlife material

   a. Game, non-game, furbearing, and fish species. (Information on the following subjects is gathered in different degrees of intensity for these groups).

      (1) Species, distribution, relative abundance.

      (2) Condition of habitat.

      (3) Limiting environmental factors.

      (4) Present and potential range.

   b. Waters (springs, reservoirs, lakes, wells, streams).

      (1) Availability as drinking water to wildlife.

      (2) Resting and breeding grounds for migratory species.

      (3) Present and potential fauna and flora.

   c. Desilting plots.

      (1) Potentialities as wildlife areas.

2. Rodents

   a. Species, distribution, relative abundance.

   b. Relation to other wildlife.

   c. Economic aspect.

3. Predators

   a. Species, distribution, relative abundance.

   b. Relation to other wildlife.

   c. Economic aspect.

4. Insects, plant diseases, noxious weeds, and livestock diseases. (These are ordinarily not investigated in the faunal survey but special investigations are made in response to requests from other sections).

5. Location of definite areas for wildlife management work.

In a unit with numerous roads a large part of the survey is conducted from an automobile. Less accessible sections are covered on horseback or on foot. Data are gathered by general observation and by sampling. The usual procedure for a single observer is to take samples which are 33 feet x 5280 feet in dimension and four acres in area. Two observers can double the width of the sample and thereby increase the area to 8 acres. Ordinarily the samples are taken at intervals of one mile, but the frequency, distribution, and total number of samples are regulated by the desired intensity of the survey. In the samples all dens and burrows are recorded as to number seen. General observations on birds, mammals and condition of the various habitats are made continuously regardless of whether samples are being taken. Rodent types are delimited as the survey progresses and are determined on the basis of dens per acre of the predominating species. Cover and food plants of game species are mapped so as to indicate present and potential range of these species. All waters are visited and evaluated for wildlife. Human activities such as agriculture

and grazing are studied to determine their relation to wildlife. Using aerial photographs and range type maps, a special wildlife management map is prepared on which are indicated the majority of the data obtained from the faunal survey. This map is augmented by a narrative report.

It was the opinion of the representatives of the various Districts that the present method of making surveys is satisfactory and should be used by all the Districts until further direction by the Regional office. The Section of Wildlife Management should utilize the information obtained by other sections, but should neither expect nor encourage these sections to make faunal surveys.

In the matter of surveys, the Section of Wildlife Management will give priority to the areas which afford the maximum opportunity for the development of wildlife or where the necessity for a plan is most urgent, and will give as much attention to other areas as is possible.

Plans

General wildlife management plans are prepared by the biologist from the data gathered on the faunal surveys, and are incorporated in the narrative reports. Detailed wildlife management plans leading to work plans are prepared in collaboration with a representative of the section which is responsible for the operations.

Check upon Application of Plans and Success of Operations

It is felt that the biologists should, as part of their routine duties, take every opportunity to check upon the degree and

success of soil conservation activities affected by the application of wildlife management plans by the work agencies. This check should be extended to determine the value of the operations as a wildlife management measure, with special attention directed to the utilization of the recommended plant species.

There is a definite shortage of basic ecologic data for wildlife species inhabiting the Southwest. This shortage is reflected in our inability to project comprehensive plans for the management of our wildlife resources. Much of the information originating in outside institutions is not applicable to this region because of the differences in environment. It is desirable that this Service promote and, to some extent, undertake such investigations as are found necessary for the proper handling of the problems with which we are confronted.

Accomplishments to Date*

Area Surveyed

Navajo District. Of the total of 18 land management units into which the Navajo Reservation has been divided, 9 units have been surveyed. These 9 units include approximately 10,000,000 acres. In the Durango sub-project there have been 2,000 acres surveyed.

Rio Grande District. Complete faunal surveys have been made upon 15 sub-projects, totaling approximately 1,250,000 acres. In addition to this, 225,000 acres have been surveyed for rodent data only.

* As of April 1, 1937

Gila Gistrict. No complete biological surveys have been undertaken, but approximately 1,000,000 acres have been surveyed to determine the rodent population and several thousand acres examined for suitability as wildlife management areas. In the course of a special detail to the regional office, the District Biologist has completed an ultra extensive game survey on several million acres outside of the District.

Utah Projects. Rodent surveys have been made from five sub-projects, totaling approximately 100,000 acres. Approximately 37,000 acres have been examined to determine suitability as game management areas.

Date Obtained from Surveys

All the Districts have, in general, been obtaining the type of data indicated in Section I. There have been some variations from this outline and these variations are indicated by Districts.

Navajo District. This district has followed closely the general outline. Special attention has been given to the determination of the forage consumption of rodents and to the social and economic aspect of game development upon the Navajo Indian Reservation.

Rio Grande District. This district has also followed closely the general outline. Special emphasis has been placed on the obtaining of general wildlife data, particularly on agricultural lands. Considerable data have been gathered on present and potential game range.

Gila District. The Section of Wildlife Management in this district has just recently standardized the nature and procedure of surveys. Thus far particular attention has been placed on surveys of potential wildlife development areas and of rodent population, distribution, and damage. Rodent survey material exists in the form of field notebooks, and appears in part in the proposed programs which have been submitted from time to time. A special preliminary report was prepared on approximately two million acres within the District which were being considered as a potential wildlife area. The District Biologist prepared for the Regional office a special report which is now being used in considering conservation operations on several million acres outside the existing District. These reports are being revised prior to further development.

Utah Projects. These projects have not standardized on the methods of execution and the type of data that their surveys are to provide. Thus far the surveys have been of two types -- game and rodent. The methods used are similar to those outlined in this bulletin.

Wildlife Management Plans

The general wildlife management plans, based upon faunal surveys, are being made by the wildlife management staff in each of the four districts. The detailed plans are being prepared in collaboration with representatives of the various other sections concerned.

Operations Altered for the Benefit of Wildlife

The degree to which the Section of Wildlife Management has

altered the operations of other sections varies considerably in the different districts.

Navajo District. Land management surveys have taken most of the attention of the various sections, with the result that there has been only limited activity in operations by the technical staff. The opportunity for the biologists to alter present operations of other sections has, therefore, also been limited. There has been some activity in the planting of shrubs and trees, and the biologists have been instrumental in the alteration of these operations to include species which will be beneficial to wildlife. The plantings in and about stock water reservoirs include plants which will be beneficial to migratory waterfowl and, at the same time, reduce wave action or act as desilting plots.

Rio Grande District. The Section of Wildlife Management on this District has successfully adjusted planting plans for shrubs and trees to the benefit of wildlife. The District Biologist is a member of the planning board, and wildlife management is being given consideration in the preparation of land management plans for all sub-projects. Livestock carrying capacity cuts for the benefit of wildlife are being considered in some cases.

Gila District. All planting plans originating on this District are being altered by the biologists to assure the inclusion of plant species desirable to wildlife management.

Utah Projects. In some projects a cut of 5 to 10 per cent in the livestock carrying capacity is being made for the benefit of

big game mammals and a clause to assure this cut is being inserted in the cooperative agreements made with the ranchers. Planting plans for shrubs and trees have been modified for the benefit of wildlife. The Grantsville Area, of about 37,000 acres, is being considered as an antelope range and arrangements have been made with the State Fish and Game Commission for animals with which to stock this area. Incidental to erosion control work along streams some stream improvement has been done.

Standardization of Methods in Region 8

Survey Methods. As previously pointed out, the present survey methods are considered adequate and applicable to all the Districts, and are to be used until further direction by the Regional office. It is realized that certain improvements and modifications are desirable and consideration is being given to these.

Symbols and Abbreviations. The Regional office has developed a system of wildlife management symbols and abbreviations which has been adopted by the districts. The list is final within the limits of its completeness, and the Regional office will make every effort to expedite compliance with requests for additional symbols and abbreviations. New material will be developed and sent to the Districts as early as possible.

Field Records. Using the present field forms as a basis, the Regional office will prepare a series of standard forms for use

by the Districts. The size of page and general method of keeping field notebooks will also be standardized.

Photographic Records. Photography is one of the best methods for recording field data in a permanent and usable form. Photographs which illustrate occupied wildlife habitat are of value in the analysis of the limiting environmental factors affecting the particular species concerned. The economic aspect of wildlife can be ideally portrayed by photographs, and photographs are essential to the recording of progress in wildlife management.

There is a definite need for wildlife photographs and for the establishment of photographic repeat stations. Stereoscopic photography has considerable application to the recording of wildlife data and it is hoped that this type of photography can be developed throughout the Districts. The Regional office will prepare instructions for the proper making of wildlife photographs and for the establishment of photographic repeat stations.

Collections. The Regional office maintains facilities for the identification of wildlife material sent in from the District offices. For this service to reach its highest efficiency it is essential that our collections of comparative material be relatively complete. This need for specimens is realized by the district biologists and they have volunteered to make every effort to obtain such materials for the Regional collection.

It is felt that it is desirable to relieve the Districts of the responsibility of maintaining a collection. In the future